

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 – 14 (canceled).

Claim 15 (previously presented). An isolated nucleic acid molecule selected from the group consisting of:

- (a) a nucleic acid molecule having the sequence of SEQ ID NO:2;
- (b) a nucleic acid molecule encoding an amino acid sequence comprising the sequence of SEQ ID NO:4;
- (c) a nucleic acid molecule encoding a fragment of the amino acid sequence of SEQ ID NO:4 having disintegrin activity and comprising amino acids 496 through 599 of SEQ ID NO:4; and
- (d) a nucleic acid molecule encoding a fragment of the amino acid sequence of SEQ ID NO:4 having disintegrin activity and comprising amino acids 532 through 586 of SEQ ID NO:4.

Claim 16 (previously presented). A recombinant vector that directs the expression of the nucleic acid molecule of claim 15.

Claims 17 – 20 (canceled).

Claim 21 (previously presented). A host cell transfected or transduced with the vector of claim 16.

Claim 22 (previously presented). A method for the expression of an SVPH3-17 (ADAM23) disintegrin polypeptide comprising culturing a host cell of claim 21 under conditions promoting expression of the vector of claim 21.

Claim 23 (previously presented). The method of claim 22, further comprising recovering the expressed polypeptide.

Claims 24 – 29 (canceled).

Claim 30 (previously presented). A host cell containing the recombinant vector of claim 16.

Claim 31 (previously presented). A nucleic acid molecule encoding a fusion protein comprising a fragment of the polypeptide of SEQ ID NO:4 having disintegrin activity and a heterologous polypeptide; wherein the fusion protein comprises an amino acid sequence selected from the group consisting of amino acids 496 through 599 of SEQ ID NO:4 and amino acids 532 through 586 of SEQ ID NO:4.

Claim 32 (previously presented). The nucleic acid molecule of claim 31 wherein the fusion protein comprises amino acids 532 through 586 of SEQ ID NO:4.

Claims 33 - 37 (canceled).

Claim 38 (previously presented). An isolated nucleic acid molecule that encodes a fragment of ADAM23 having disintegrin activity, wherein ADAM23 is the polypeptide of SEQ ID NO:4, and wherein the fragment of ADAM23 comprises an amino acid sequence selected from the group consisting of amino acids 496 through 599 of SEQ ID NO:4, and amino acids 532 through 586 of SEQ ID NO:4.

Claim 39 (canceled).

Claim 40 (previously presented). The nucleic acid of claim 38 wherein the fragment of ADAM23 comprises amino acids 532 through 586 of SEQ ID NO:4.

Claim 41 (canceled).

Claim 42 (previously presented). The nucleic acid of claim 38 wherein the fragment of ADAM23 further comprises an ADAM23 pro domain amino acid sequence, wherein the ADAM23 pro domain amino acid sequence comprises an amino acid sequence selected from the group consisting of amino acids 145 through 161 of SEQ ID NO:4; amino acids 162 through 186 of SEQ ID NO:4; amino acids 192 through 206 of SEQ ID NO:4; amino acids 210 through 241 of SEQ ID NO:4; amino acids 231 through 261 of SEQ ID NO:4; and amino acids 263 through 282 of SEQ ID NO:4.

Claim 43 (canceled).

Claim 44 (previously presented). The nucleic acid of claim 38 wherein the fragment of ADAM23 further comprises an ADAM23 catalytic domain amino acid sequence, wherein the ADAM23 catalytic domain amino acid sequence is selected from the group consisting of amino acids 315 through 327 of SEQ ID NO:4; amino acids 339 through 356 of SEQ ID NO:4; amino acids 357 through 374 of SEQ ID NO:4; amino acids 381 through 397 of SEQ ID NO:4; amino acids 424 through 461 of SEQ ID NO:4; and amino acids 450 through 471 of SEQ ID NO:4.

Claim 45 (previously presented). The nucleic acid of claim 38 wherein the fragment of ADAM23 further comprises an ADAM23 cysteine-rich domain amino acid sequence, wherein the ADAM23 cysteine-rich domain amino acid sequence comprises amino acids 599 through 786 of SEQ ID NO:4.

Claim 46 (previously presented). The nucleic acid of claim 38 wherein the fragment of ADAM23 further comprises an ADAM23 cysteine-rich domain amino acid sequence, wherein the ADAM23 cysteine-rich domain amino acid sequence is selected from the group consisting of amino acids 643 through 652 of SEQ ID NO:4; amino acids 653 through 724 of SEQ ID NO:4; amino acids 720 through 733 of SEQ ID NO:4; amino acids 725 through 741 of SEQ ID NO:4; and amino acids 744 through 781 of SEQ ID NO:4.

Claim 47 (previously presented). A nucleic acid molecule encoding a fusion protein comprising a fragment of the polypeptide of SEQ ID NO:4 having disintegrin activity and a heterologous polypeptide; wherein the fusion protein comprises an amino acid sequence selected from the group consisting of amino acids 496 through 599 of SEQ ID NO:4 and amino acids 532 through 586 of SEQ ID NO:4; and wherein the fusion protein comprises a heterologous polypeptide selected from the group consisting of an Fc polypeptide, a peptide linker, and/or a leucine zipper polypeptide.

Claim 48 (previously presented). An isolated nucleic acid molecule that encodes a fragment of ADAM23 having disintegrin activity and further comprises an ADAM23 pro domain amino acid sequence, wherein ADAM23 is the polypeptide of SEQ ID NO:4, and wherein the fragment of ADAM23 comprises an amino acid sequence selected from the group consisting of amino acids 496 through 599 of SEQ ID NO:4 and amino acids 532 through 586 of SEQ ID NO:4; and wherein the ADAM23 pro domain amino acid sequence comprises amino acids 58 through 286 of SEQ ID NO:4.

Claim 49 (previously presented). An isolated nucleic acid molecule that encodes a fragment of ADAM23 having disintegrin activity and further comprises an ADAM23 catalytic domain amino acid sequence, wherein ADAM23 is the polypeptide of SEQ ID NO:4, and wherein the fragment of ADAM23 comprises an amino acid sequence selected from the group consisting of amino acids 496 through 599 of SEQ ID NO:4 and amino acids 532 through 586 of SEQ ID NO:4; and wherein the ADAM23 catalytic domain amino acid sequence comprises amino acids 286 through 495 of SEQ ID NO:4.

Claim 50 (new). An isolated nucleic acid molecule that encodes a polypeptide having disintegrin activity and sharing at least 90% amino acid identity with SEQ ID NO:4, wherein said polypeptide comprises an amino acid sequence selected from the group consisting of amino acids 496 through 599 of SEQ ID NO:4 and amino acids 532 through 586 of SEQ ID NO:4.

Claim 51 (new). A recombinant vector that directs the expression of the nucleic acid molecule of claim 38.

Claim 52 (new). A host cell containing the recombinant vector of claim 51.

Claim 53 (new). A method for the expression of a disintegrin polypeptide comprising culturing a host cell of claim 52 under conditions promoting expression of the vector of claim 52.

Claim 54 (new). A recombinant vector that directs the expression of the nucleic acid molecule of claim 50.

Claim 55 (new). A host cell containing the recombinant vector of claim 54.

Claim 56 (new). A method for the expression of a disintegrin polypeptide comprising culturing a host cell of claim 55 under conditions promoting expression of the vector of claim 55.

Claim 57 (new). An isolated nucleic acid molecule encoding a polypeptide having disintegrin activity, wherein said polypeptide comprises amino acids 496 through 599 of SEQ ID NO:4.

Claim 58 (new). A recombinant vector that directs the expression of the nucleic acid molecule of claim 57.

Claim 59 (new). A host cell containing the recombinant vector of claim 58.

Claim 60 (new). A method for the expression of a disintegrin polypeptide comprising culturing a host cell of claim 59 under conditions promoting expression of the vector of claim 59.